



**APHIS -PPQ/Non-Federal Responsibilities for Identification of *Phakopsora pachyrhizi***

**May 2, 2005**

*Phakopsora pachyrhizi*, cause of Asian soybean rust (SBR), was found for the first time in the United States in Louisiana, November 6, 2004. It was subsequently found in additional southeastern states on soybeans as well as kudzu. The disease is likely to spread very rapidly to other soybean-growing areas in the US during the 2005 growing season by means of windborne spores. Therefore, APHIS-PPQ is not attempting to prevent its spread via a domestic quarantine regulation. State regulatory officials, growers, extension agents, and others are very interested in quick detection of SBR in order to effectively manage the disease. In this regard, PPQ will be allowing States to conduct their own diagnostics as they deem necessary after PPQ confirms the first detection on a host in a State. Permits for importation and interstate movement of *P. pachyrhizi* and *P. meibomia* are still required, as would be the case for any plant pest.

A number of diagnosticians within the National Plant Diagnostic Network (NPDN) and State departments of agriculture have been trained to morphologically identify *P. pachyrhizi* and they have trained first responders. A few scientists have been trained to use real-time PCR to identify *P. pachyrhizi* and differentiate it from the morphologically similar but less aggressive *Phakopsora meibomia*. PPQ is encouraging the States to submit the first suspect samples for diagnosis through the NPDN laboratories until SBR is confirmed in a State or county during the 2005 growing season. The latter species has not been found in the continental US and therefore any *Phakopsora* species on soybean in the US is highly likely to be *P. pachyrhizi*. Ultimately, the soybean grower may not care to know if the soybean rust symptoms are caused by one or both of the *Phakopsora* species. States should decide whether identifications, after the initial PPQ-confirmed state/host records, are based on morphology, or morphology and PCR.

**Responsibilities for Identifying *Phakopsora pachyrhizi***  
**(Revised to Apply to Various Sample Sources, April 20, 2005)**

<b>Issue</b>	<b>Initial Diagnostics</b>	<b>PPQ Confirmation</b>	<b>Outcome</b>
First US observation of SBR-like symptoms in a <u>State</u>	Send sample to the diagnostic lab/authority designated by the State. If the lab/authority believes it may be SBR, a sample is sent to PPQ-NIS.	PPQ-NIS examines the sample morphologically. If <i>Phakopsora</i> , then a sub-sample is sent to PPQ-CPHST for real-time PCR.	New <u>State</u> record if confirmed positive by PPQ.  Diagnostic authority enters record into database [PDIS, SPDN, NAPIS, or APHIS]
First US observation of SBR-like symptoms on a <u>host</u> not previously reported in a State	Send sample to the diagnostic lab/authority designated by the State. If the lab/authority believes it may be SBR, a sample is sent to PPQ-NIS.	PPQ-NIS examines the sample morphologically. If <i>Phakopsora</i> , then a Sub-sample is sent to PPQ-CPHST for real-time PCR.	New <u>State*Host</u> record if confirmed positive by PPQ.  Diagnostic authority enters record into database [PDIS, SPDN, NAPIS, or APHIS]
First US observation of SBR-like symptoms in a <u>county</u> from a State where SBR has already been confirmed by PPQ	Send sample to the diagnostic lab/authority designated by the State (Identification may be based on morphology, or both morphology and PCR.)	N/A. DO NOT SEND TO PPQ	New <u>county</u> record.  Diagnostic authority enters record into database [PDIS, SPDN, NAPIS, or APHIS]
Subsequent observation of SBR-like symptoms in <u>counties</u> where soybean rust has already been confirmed.	Send sample to the diagnostic lab/authority designated by the State (Identification may be based on morphology, or both morphology and PCR.)	N/A. DO NOT SEND TO PPQ	Diagnostic authority enters record into database [PDIS, SPDN, NAPIS, Industry, or APHIS]